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I HEREBY CERTIFY that annexed hereto is a true copy of documents filed in connection with the following patent application:

Application No. S980595

Date of Filing 21 July 1998

Applicant ALLTRACEL PHARMACEUTICALS PLC, an
Irish company of 87 Quinns Road, Shankill, County
Dublin, Ireland.

Dated this 7 day of December, 2000.

An officer authorised by the
Controller of Patents, Designs and Trademarks.

REQUEST FOR THE GRANT OF A PATENT
PATENTS ACT, 1992

The Applicant(s) named herein hereby request(s)
_____ the grant of a patent under Part II of the Act
 X the grant of a short-term patent under Part III of the Act
on the basis of the information furnished hereunder.

1. Applicant(s)

Name Alltracel Pharmaceuticals PLC

Address 87 Quinns Road
Shankill
County Dublin
Ireland

Description/Nationality

An Irish company

2. Title of Invention

"Compositions"

3. Declaration of Priority on basis of previously filed application(s) for same invention (Sections 25 & 26)

| <u>Previous filing date</u> | <u>Country in or for which filed</u> | <u>Filing No.</u> |
|-----------------------------|------------------------------------------|-------------------|
|-----------------------------|------------------------------------------|-------------------|

4. Identification of Inventor(s)

Name(s) of person(s) believed
by Applicants(s) to be the inventor(s)

Name: Ivan Santar, a citizen of the Czech Republic
Address: Travniky 1006, CZ-6602 Predklasteri, Czech Republic.

Name: Frantisek Kiss, a citizen of the Czech Republic
Address: Bednarova 20a, CZ-61900 Brno, Czech Republic.

Name: Jiri Briestensky, a citizen of the Czech Republic
Address: Skolska 413, CZ-50343 Cernilov, Czech Republic.

5. Statement of right to be granted a patent (Section 1 (b))

S 9 8 0 5 9 5

The Applicant derives the rights to the invention by virtue of Agreements dated December 23, 1996 and December 30, 1996.

6. Items accompanying this Request – tick as appropriate

- (i) ☒ prescribed filing fee (£50.00)
- (ii) ☐ specification containing a description and claims
☒ specification containing a description only
☐ Drawings referred to in description or claims
- (iii) ☐ An abstract
- (iv) ☐ Copy of previous application (s) whose priority is claimed
- (v) ☐ Translation of previous application whose priority is claimed
- (vi) ☒ Authorisation of Agent (this may be given at 8 below if this Request is signed by the Applicant (s))

7. Divisional Application (s)

The following information is applicable to the present application which is made under Section 24 –

Earlier Application No:

Filing Date:

8. Agent

The following is authorised to act as agent in all proceedings connected with the obtaining of a patent to which this request relates and in relation to any patent granted -

Name

Address

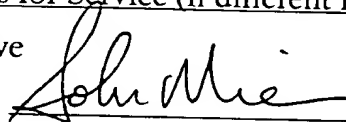
John A. O'Brien & Associates

The address recorded for the time being in the Register of Patent Agents, and currently Third Floor, Duncairn House, 14 Carysfort Avenue, Blackrock, Co. Dublin, Ireland.

9. Address for Service (if different from that at 8)

As above

Signed



JOHN A. O'BRIEN & ASSOCIATES

Date July 21, 1998

~~APPLICATION FILED~~

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"Compositions"Introduction

5 The invention relates to polyanhydroglucuronic acids and salts thereof. The term polyanhydroglucuronic acid and salts thereof as used herein includes copolymers thereof, especially with anhydroglucose.

10 Co-pending patent application PCT IE98/00003 describes a haemostatically active aerosol composition of polyanhydroglucuronic acid and/or acceptable salts thereof.

15 Co-pending patent application PCT IE98/00004 describes particular polyanhydroglucuronic acids and salts thereof and a method of preparing such compounds.

20 In particular therefore, the term polyanhydroglucuronic acids and salts thereof includes the acids and salts referred to in our co-pending applications mentioned above.

 This invention relates especially to a composition incorporating polyanhydroglucuronic acids and salts thereof.

Statements of Invention

25 According to the invention there is provided a shaped article formed from polyanhydroglucuronic acids and salts thereof.

30 The shaped article may, for example be in the form of a rigid pin, especially a dental pin for use in stomatology, or a flexible suppository.

Most preferably, the polyanhydroglucuronic acids and salts thereof are those described in co-pending PCT IE98/00004.

Detailed Description

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Various pressing moulds may be used to produce suitably shaped pins from polyanhydroglucuronic acids and salts thereof particularly as described in co-pending Application PCT IE98/00004. Such pins may be used in stomatology as fillings of post-extractional tooth cavities to efficiently control excessive bleeding.

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A positive effect on the healing of such wounds also results. One advantage of pins prepared by this method is that the pressing method does not require use of adjuvants such as glycols, alcohols, or water, the presence of which may reduce the haemostatic activity.

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The pins may with advantage include antibacterial components of the inorganic or organic cation type which may be bound to the COOH, OH, or both types of these groups present in the polymeric chain of polyanhydroglucuronic acids and salts thereof to form salts or complex salts. Examples of cations which may be used for this purpose are Zn^{2+} , Hg^{2+} , Ag^+ , or Cu^{2+} ions, aminoglycosidic, aminocyclitolic or chinolinic antibiotics, chlorohexidine or other amines having bactericidal or bacteriostatic effects. Alternatively, the pins may also include pharmacologically active substances not directly bound to the polymeric chain such as herb extracts, vitamins, or even substances listed physically admixed to the polyanhydroglucuronic acids and salts thereof.

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The manufacture is simple and inexpensive since it involves one single production step; no contraction or cracking of pins manufactured by such a pressing process has been observed.

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Alternatively, for applications requiring flexible pins it is possible to apply conventional moulding techniques such as those used for manufacture of

suppositories, preferably on hydrophobic bases such as cocoa butter or petrolatum to prevent reduction of the haemostatic activity of the polyanhydroglucuronic acids and salts thereof.

- 5 The invention is not limited to the embodiments hereinbefore described which may be varied in detail.